

Part 2. Employer's Requirements
Section VI – 4 Supplemental Information
VI – 4 – 2 Topographic Survey

Civil Works and Maintenance
Equipment for Depots

Supplementary Information of Topographic Survey

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1. Topographic Survey Data for Baclaran Expansion Depot

- 1.1. Topographic Survey Report on LRT Line 1 South, Cavite Extension with an approximate area of hectares dated May 13, 2015



GEOLINK CORPORATION

Rm. 507 Webjet Acropolis Bldg., # 88 E. Rodriguez Jr. Ave., Bagumbayan, Quezon City
Tel / Fax 02 655 6281 / Tel 02 655 6345
Email: emdlp@yahoo.com

NARRATIVE TECHNICAL REPORT

For the

**Topographic Survey of LRT 1 South,
Cavite Extension**

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CHAPTER 1 INTRODUCTION

1.1. Background

The subject area is within Light Rail Transit (LRT) Line 1 South, Cavite Extension with an approximate area of 4 hectares.

1.2. Scope of Work

- Establishment of Horizontal and Vertical Controls.
- Conduct topographic survey; actual survey of all man-made structures and natural ground such as: buildings, roads, manholes, culverts, electric post, trees, etc.
- Preparation of plans.

1.3. Professional Staffing and Implementations

The Service Provider must provide curriculum vitae of their personnel as a proof of the Service Provider's capability to finish the project and the personnel's capability to handle the project. The following are the minimum manpower qualifications and official functions.

Project Manager:

Must be a Licensed Geodetic Engineer with experience as Project Manager. Must be capable of His Official Functions as Over-all project management and supervision, Reviews reports and documentation and Coordinates with DENR, LGUs and other Stakeholders.

Technical Staff:

Must be a College Graduate with the capability to monitor field operations and prepares reports, evaluates outputs of field operations management group.

Chief of Party:

Licensed Geodetic Engineer with experience as Chief of Party. Possessing the capabilities to work at full time for the project, deals directly with the End-User, Manages Field Office operations and related activities, Organizes planning operations with the key personnel for the scheduling of GNSS observations, Cross Section and Profile Survey.

Instrument Man:

With competent skills in operating survey-grade GPS and leveling instruments, performs field data gathering and evaluation.

Safety/Survey Aide:

Assists the instrument man for clearing out the observation site.

Driver/Utility Man:

Has Driver's License, In charge of logistics and assists in the maintenance of field office facilities.

1.4. List of Personnels

Project Manager: Engr. Eric M. Dela Paz

Technical Staff: Effany A. Balaquit

Chief of the Party: Engr. Eric M. Dela Paz

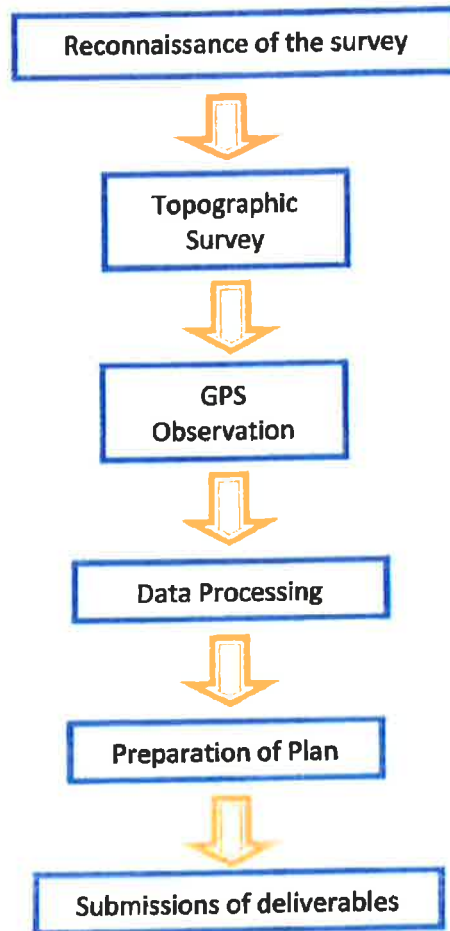
Instrument Man: Joseph Almera
Aljohn Gascon
Sado Monforte
Vincent Gascon
Jorge Rene Guerrero
Jayson Gabay

Safety/Survey Aide: John Palmes
Patrick Gatdula
Ronald Catigan
Leonard Escamilla
Jimmy Sarmiento
Bryan Escamilla

Driver/ Utility Man: Joel Sariago
Daniel Orca

CHAPTER 2 METHODOLOGY

2. Field Plan



CHAPTER 3 RESULTS AND DISCUSSIONS

3.1. Actual Field Survey

Upon receiving the work clearance from CMX Consortium, the team mobilized last April 17, 2015 to the project site and conduct the topographic survey. Topographic surveys are used to identify and map the contours of the ground and existing features on the surface of the earth or slightly above or below the earth's surface (i.e. trees, buildings, streets, walkways, manholes, utility poles, retaining walls, etc.).

The next day, the team conducts Global Positioning System (GPS) static observation to determine the true coordinates and elevations of bench marks used during the topographic survey.

3.2. Office Works

Preparation of plans were made in the office by the technical department. The data gathered from the field was processed using specialized software compatible to the file format of total station and GPS.



GEOLINK CORPORATION

Rm. 507 Webjet Acropolis Bldg., # 88 E. Rodriguez Jr. Ave., Bagumbayan, Quezon City
Tel / Fax 02 6556281 / Tel 02 6556345 Email: emdlp@yahoo.com

May 13, 2015

Masaru Aikawa

Project Manager
CMX Consortium
3rd Floor Keystone Building
Buendia corner Pasong Tamo
Makati City

Attention: Akira Iwashita
Civil Engineer

Subject: Topographic Survey Report on LRT Line 1 South, Cavite Extension with an approximate area of 4 hectares.

To Whom It May Concern:

This is to report the result of Topographic Survey done on LRT Line 1 south, Cavite Extension, located at Baclaran, Pasay City.

We conducted an actual field survey last April 17, 2015. Prior to mobilization, sketch and descriptions of some GCPs reference points as well as the available benchmarks within the priority of the project area were gathered from the respective government office.

Establishment of primary control points was done using GPS observation and was tied up to GCP's and Benchmarks by means of GPS observation as well. The secondary control points were established by means of traverse, and these were tied up to primary control points.

Data from GPS receivers were downloaded and computed.

ID	Easting	Northing	Elevation
GPS1	500037.959	1606823.290	2.842
GPS2	500033.108	1606993.199	3.334
GPS3	499853.253	1606863.578	2.836

For vertical and horizontal reference, we conduct Static Observation using GNSS receiver. All references are based from NAMRIA point.

Reference used:

BMGM-33
N = 1602249.374
E = 498897.002
Elev. = 5.322 m (MSL)

Coordinate System: PTM Zone III, PRS '92 (Datum)

Our team conducted verification survey last April 29, 2015 on LRT Line 1 south, Cavite Extension, located at Baclaran, Pasay City, but based on the previous elevation of track 0 we found out that there is a discrepancy of 0.753m.

If you have any questions about the result of the survey, please don't hesitate to call us.

Thank you very much.

Very truly yours,


Marvin Andrew Caliolio
Geolink Corporation



Republic of the Philippines
Department of Environment and Natural Resources
NATIONAL MAPPING AND RESOURCE INFORMATION AUTHORITY

April 16, 2015

CERTIFICATION

To whom it may concern:


This is to certify that according to the records on file in this office, the requested survey information is as follows -

Province: NCR - MANILA, FIRST DISTRICT		
Station Name: GM-33M		
Island: LUZON	Municipality: PARAÑAQUE	Barangay: LAS PIÑAS RIVER
Elevation: 5.3216 +/- 0.02 m.	Order: 1st Order	Datum: Mean Sea Level
Latitude:	Longitude:	

Location Description

BM GM-33M is located at the N end of Kaybuboy Bridge, W side of Dr. A Santos Ave. (Sucat Rd.) Parañaque. The benchmark is situated at the top of the guardrail of the bridge, 40cm high and 50cm from the sidewalk. Mark is a 3 in. copper nail, centered and embedded on a 15 cm x 15 cm concrete putty with inscription GM-33M 2001 NAMRIA.

Requesting Party: **GEOLINK Corporation**
Purpose: **Reference**
OR Number: **8077974 I**
T.N.: **2015-0724**


RUEL M. BELEN, MNSA
Director, Mapping And Geodesy Branch



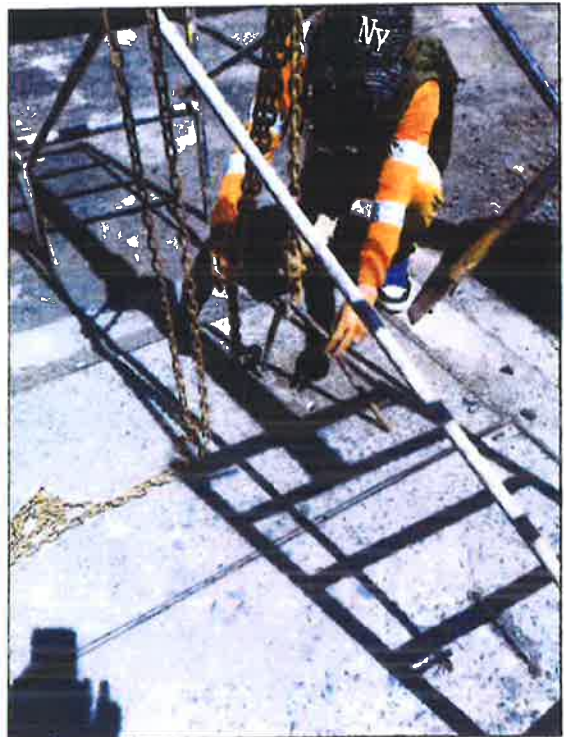
NAMRIA OFFICES:
Main - Lawton Avenue, Fort Bonifacio, 1634 Taguig City, Philippines Tel. No : (632) 810-4831 to 41
Branch - 421 Barraca St. San Nicolas, 1010 Manila, Philippines, Tel. No (632) 241-3494 to 98
www.namria.gov.ph

ISO 9001: 2008 CERTIFIED FOR MAPPING AND GEOSPATIAL INFORMATION MANAGEMENT

ANNEXES A. Pictures During the Survey







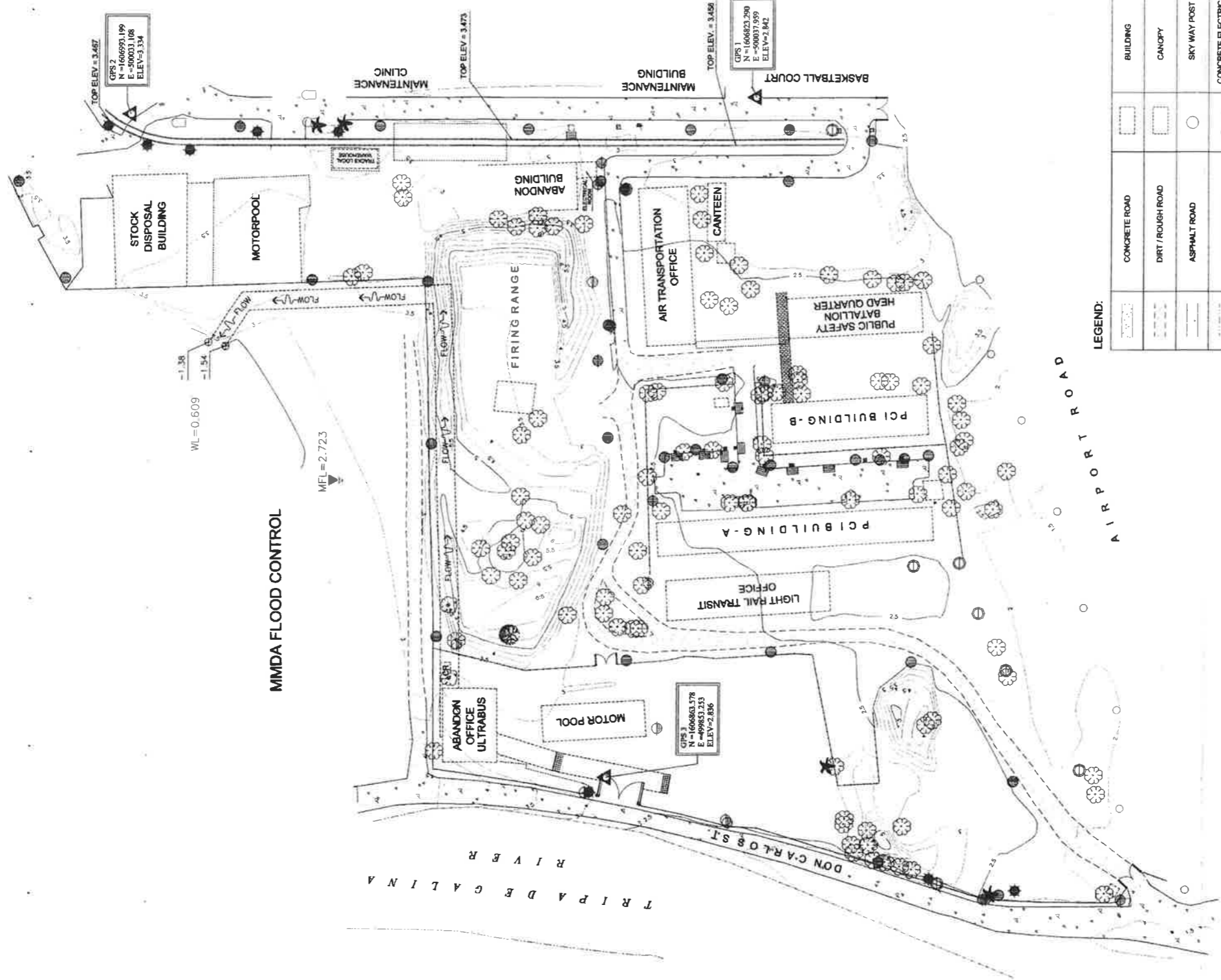
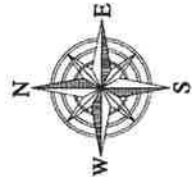








1.2 Drawing of “Topographic Plan” for Baclaran Expansion Depot



LEGEND:

	CONCRETE ROAD		BUILDING
	DIRT / ROUGH ROAD		CANOPY
	ASPHALT ROAD		SKY WAY POST
	COVERED CANAL		CONCRETE ELECTRICAL POST
	WATER FLOW		WOODEN ELECTRICAL POST
	BANK		LAMP POST/POWER POST
	FOOTPATH		ORDINARY TREE/FRUIT BEARING COCONUT TREE
	RAILING		SUMP
	WALL		RECTANGULAR MANHOLE
	ORDINARY FENCE		INVERT
			MAJOR/MINOR CONTOUR

NOTE: TRUE COORDINATES AND ELEVATION WERE USED IN THIS TOPOGRAPHIC PLAN.*

GPS 1 N=50037.959 E=50033.250 Z=2.842	GPS 2 N=50033.108 E=49983.159 Z=3.334	GPS 3 N=49985.253 E=50083.576 Z=2.686
--	--	--

SURVEYED BY : **GEOLINK CORPORATION**
 RM 507 MELBAY ACAPURUS BLDG. 68 E. RODRIGUEZ JR. AVE., MANDAYAN
 QUEZON CITY TEL. FAX (02) 855-4311

APPROVED BY : **ERIC M. DELA PAZ**
 GEOMETRIC ENGINEER
 P.R.C. No. : 3847 DATE : 7-9-92
 P.I.R. No. : 022169 DATE : 1-08-15

SURVEYED FOR : **CMX CONSORTIUM**

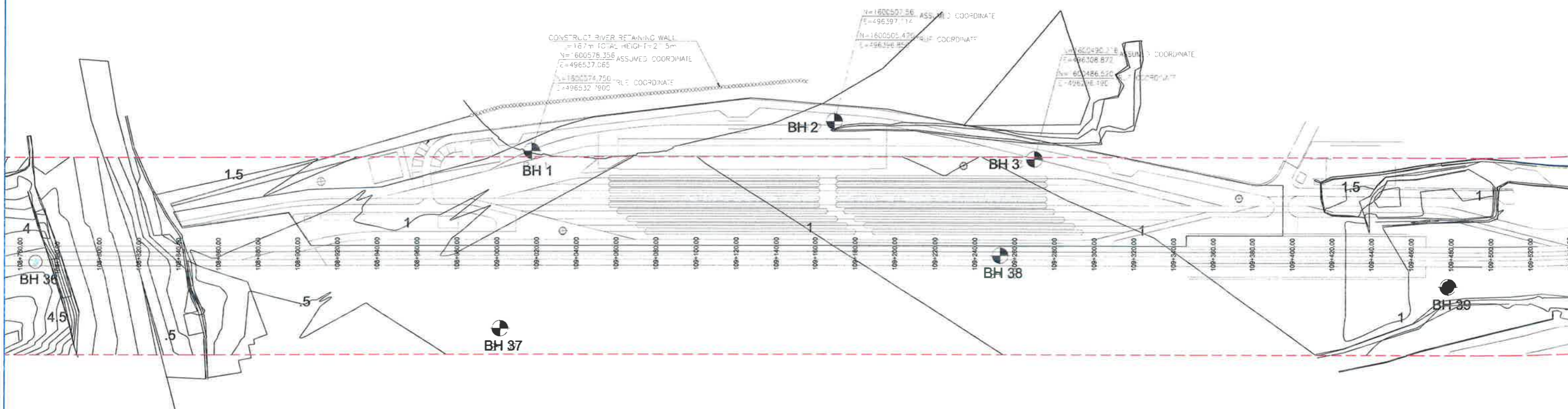
PROJECT TITLE : **TOPOGRAPHIC SURVEY OF LRT LINE 1 SOUTH, CAVITE EXTENSION WITH AN APPROX. AREA OF 4 HAS.**

SHEET CONTENTS : **TOPOGRAPHIC PLAN**

SHEET NO. : **1**

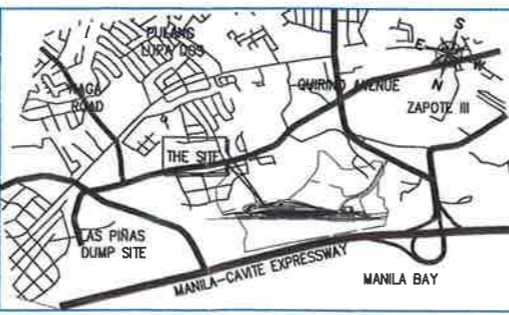
2. Topographic Survey Data for Zapote Satellite Depot

2.1. Drawing of “Topographic Plan of Zapote Satellite Depot”



CLIENT

Republic of the Philippines
DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS



LRT Lines 1 and 2 Extension Projects

LRT Line 1 Office:
3rd Floor, Keystone Building
220 Sen. Gil J. Puyat Avenue
Makati City, 1220
Tel: 894-5811 / 894-5764

LRT Line 2 Office:
Semicon Building
50 Marcos Highway Brgy.
Dela Paz, Pasig City
Tel: 894-5811 / 894-5764

SCALE: 1:2000

DRAWING TITLE:	
TOPOGRAPHIC PLAN OF ZAPOTE SATELLITE DEPOT	
CAD FILE #:	
Dwg. #:	Rev. #:

3. ROW Drawings for Zapote Depot and Baclaran Depot

SN No. 5801871

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF JUSTICE
Land Registration Authority
QUEZON CITY

PASAY CITY

REGISTRY OF DEEDS FOR THE

Transfer Certificate of Title

No. 142537

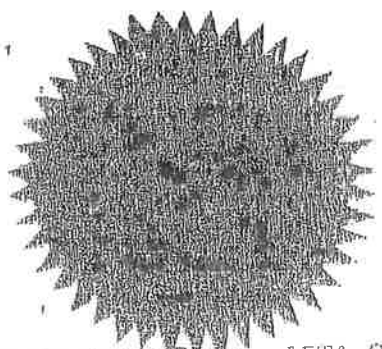
IT IS HEREBY CERTIFIED that certain land situated in the Pasay City, Metro-Manila,
P. H. L. J. L. P. P. I. R. C. D. bounded and described as follows:

A PARCEL OF LAND (as described on plan, Sgs-13-000010, being a portion of Lot 3271, Cad-259, Pasay Cadastre, L.R.C. Rec. No. 2482), situated in the Bo. of San Roque, Pasay City, Metro-Manila, Island of Luzon. Bounded on the NE., along lines 1-2-3-4-5-6-7-8-9 by Port. of Lot 3271, Cad-259, Pasay Cadastre; along line 9-10 by Aurora Ave.; on the E., & SE., along lines 10-11-12-13-14-15-16-17 by Port. of Lot 3271, Cad-259; on the SW., S., & SE., along lines 17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33 by Existing Airport Road; on the NW., along lines

is registered in accordance with the provisions of the Property Registration Decree in the name of
The **LIGHT RAIL TRANSIT AUTHORITY (LRTA)**, a govt. corp. duly organized and existing by virtue of Executive Order No. 603, as amended,
as owner thereof in fee simple, subject to such of the encumbrances mentioned in Section 44 of said Decree as may be subsisting, and to

IT IS FURTHER CERTIFIED that said land was originally registered on the 17th day of October in the year nineteen hundred and thirteen, in the Registration Book of the Office of the Register of Deeds of Rizal, Volume 12, page, as Original Certificate of Title No., pursuant to Decree No., issued in L. R. C. Record No. 2484, in the name of:

This certificate is a transfer from Transfer Certificate of Title No. 6736/T-34, which is cancelled by virtue hereof in so far as the above-described land is concerned.



Entered at Pasay City, Metro-Manila, Philippines, on 02nd day of February, in the year two thousand and 10.

ATTEST:

Administration Bldg., LRTA Compd.
Aurora Blvd., Pasay City, M.M.
(Owner's postal address)

MARIO SP. DIAZ
(Register of Deeds)

*State the civil status, name of spouse if married, age if a minor, citizenship and residence of the registered owner. If the owner is a married woman, state also the citizenship of her husband. If the land is registered in the name of the conjugal partnership, state the citizenship of both spouses

OWNER'S DI
CATE CE
HICATE



MEMORANDUM OF ENCUMBRANCES

(When necessary use this page for the continuation of the technical description)

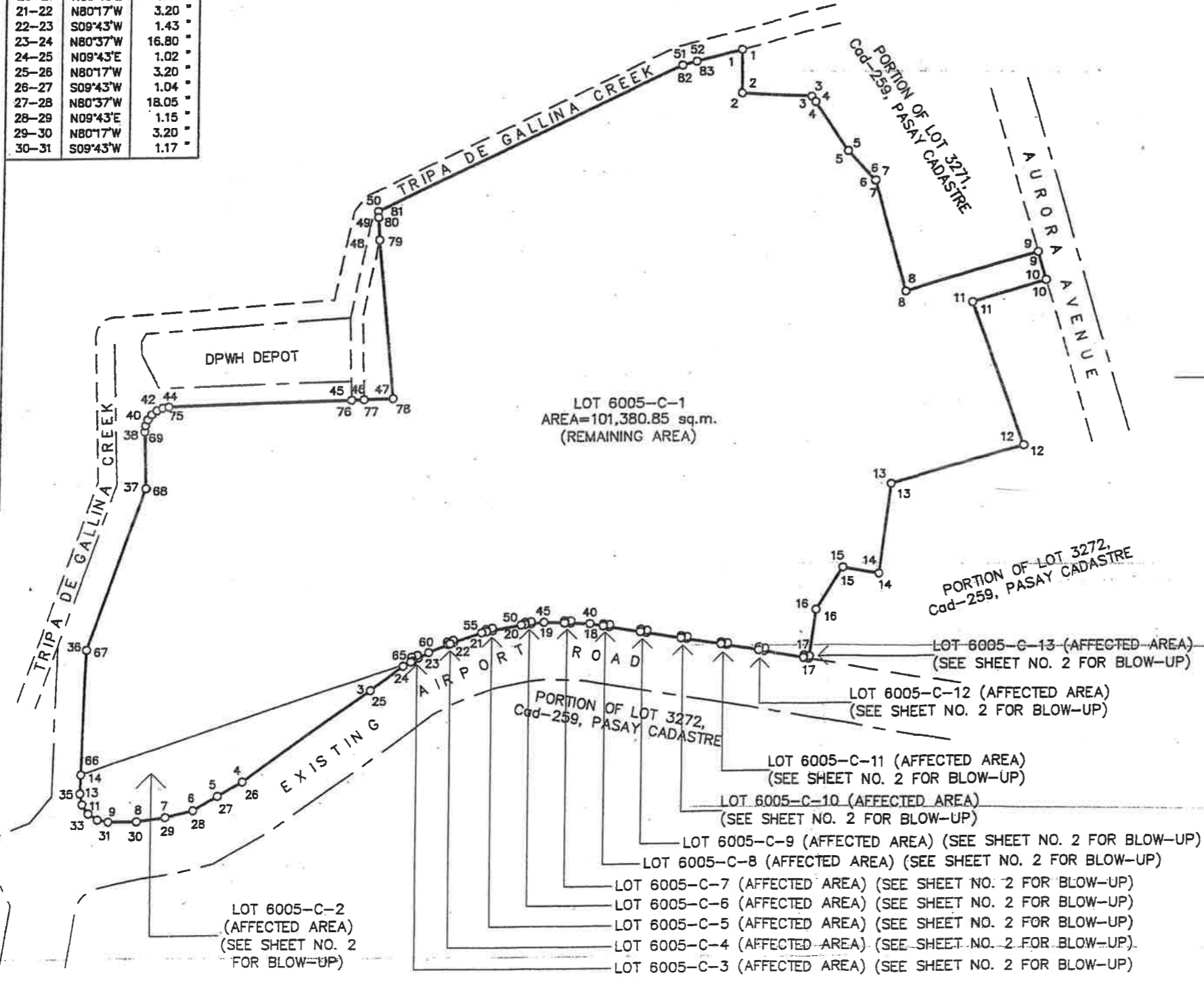
Entry No.

[continuation of technical description]
 33-34-35-36-37-38-39-40-41-42-43-45 by Existing Road; along lines 45-46 by
 DFWH Depot; along lines 46-47-48-49 by Tripa de Gallina Creek; and along
 line 49-1 by Portion of Lot 3271, Cad-259, Pasay Cadastre. Beginning at a
 point marked "1" on plan, being S. 25 deg. 49' W., 176.49 m. from BBM No. B,
 Cad-259, Pasay Cad., thence; S. 0 deg. 19' E., 22.78 m. to pt. 2; S. 86 deg.
 53' E., 37.84 m. to pt. 3; S. 36 deg. 54' E., 3.45 m. to pt. 4; S. 33 deg.
 45' E., 31.07 m. to pt. 5; S. 41 deg. 47' E., 21.22 m. to pt. 6; N. 74 deg.
 17' E., 0.33 m. to pt. 7; S. 16 deg. 05' E., 61.33 m. to pt. 8; N. 73 deg.
 05' E., 71.17 m. to pt. 9; S. 16 deg. 32' E., 15.49 m. to pt. 10; S. 72 deg.
 36' W., 39.69 m. to pt. 11; S. 19 deg. 50' E., 80.91 m. to pt. 12; S. 73 deg.
 40' W., 71.47 m. to pt. 13; S. 7 deg. 11' W., 47.78 m. to pt. 14; N. 80 deg.
 39' W., 18.97 m. to pt. 15; S. 31 deg. 30' W., 26.09 m. to pt. 16; S. 7 deg.
 03' W., 26.01 m. to pt. 17; N. 80 deg. 37' W., 117.30 m. to pt. 18; N. 88
 deg. 07' W., 24.00 m. to pt. 19; S. 83 deg. 23' W., 11.98 m. to pt. 20; S. 79
 deg. 10' W., 20.94 m. to pt. 21; S. 70 deg. 59' W., 17.31 m. to pt. 22; S. 67
 deg. 39' W., 12.09 m. to pt. 23; S. 62 deg. 20' W., 15.03 m. to pt. 24; S. 53
 deg. 24' W., 21.10 m. to pt. 25; S. 54 deg. 48' W., 82.00 m. to pt. 26; S. 60
 deg. 28' W., 15.00 m. to pt. 27; S. 60 deg. 10' W., 15.00 m. to pt. 28; S. 76
 deg. 50' W., 15.00 m. to pt. 29; S. 82 deg. 10' W., 15.00 m. to pt. 30; S. 89
 deg. 45' W., 15.00 m. to pt. 31; N. 78 deg. 46' W., 5.85 m. to pt. 32; N. 56
 deg. 17' W., 5.85 m. to pt. 33; N. 33 deg. 43' W., 5.85 m. to pt. 34; N. 11
 deg. 14' W., 5.85 m. to pt. 35; N. 1 deg. 56' E., 75.00 m. to pt. 36; N. 19
 deg. 28' E., 90.00 m. to pt. 37; N. 1 deg. 51' W., 30.00 m. to pt. 38; N. 5
 deg. 42' E., 3.33 m. to pt. 39; N. 20 deg. 33' E., 3.33 m. to pt. 40; N. 38
 deg. 50' E., 3.33 m. to pt. 41; N. 50 deg. 37' E., 3.33 m. to pt. 42; N. 65
 deg. 44' E., 3.33 m. to pt. 43; N. 80 deg. 41' E., 3.33 m. to pt. 44; N. 88
 deg. 11' E., 96.73 m. to pt. 45; N. 1 deg. 48' W., 43.72 m. to pt. 46; N. 11
 deg. 24' E., 53.07 m. to pt. 47; N. 37 deg. 36' E., 5.38 m. to pt. 48; N. 64
 deg. 12' E., 175.50 m. to pt. 49; N. 86 deg. 54' E., 31.43 m. to the point of
 beginning; containing an area of ONE HUNDRED SEVEN THOUSAND ONE HUNDRED
 SEVENTY EIGHT (107,178) SQUARE METERS. All points referred to are indicated
 on the plan and are marked on the ground by P.S. cyl. conc. mons. 15 X 60 cm
 bearings true; date of original survey, Nov.-Dec. 1909 and that of the
 segregation survey, Oct. 12-22, 1985. Approved 18 July 1990.

MARIO SP. DIAZ, Actg. Registrar of Deeds

(Memorandum of Encumbrances continued on Page -B)
(Technical Description continued on Additional Sheet Page -)

TECHNICAL DESCRIPTION			LINES	BEARING	DISTANCE	LINES	BEARING	DISTANCE	LINES	BEARING	DISTANCE	LINES	BEARING	DISTANCE
BOUNDARY			1-2	S00°19'E	22.78 M.	31-32	N80°37'W	3.20	51-52	N13°02'W	1.35	71-72	N35°50'E	3.33
1-2	S00°19'E	22.78 M.	2-3	S86°53'E	37.84	32-33	N09°43'E	1.27	52-53	S76°58'W	3.20	72-73	N50°37'E	3.33
2-3	N86°53'E	37.84	3-4	S36°54'E	3.45	33-34	N80°17'W	3.20	53-54	S13°02'E	1.23	73-74	N65°44'E	3.33
3-4	S36°54'E	3.45	4-5	S33°45'E	31.07	34-35	S09°43'W	1.29	54-55	S79°10'W	2.85	74-75	N80°41'E	3.33
4-5	S33°45'E	31.07	5-6	S41°47'E	21.22	35-36	N80°37'W	16.43	55-56	S70°59'W	15.25	75-76	N88°11'E	96.73
5-6	S41°47'E	21.22	6-7	N74°17'E	0.33	36-37	N08°41'E	1.23	56-57	N17°46'W	1.25	76-77	N88°11'E	6.50
6-7	N74°17'E	0.33	7-8	S16°05'E	61.33	37-38	N83°19'W	3.20	57-58	S72°14'W	3.20	77-78	N88°11'E	15.14
7-8	S16°05'E	61.33	8-9	N73°05'E	71.17	38-39	S06°41'W	1.08	58-59	S17°46'E	1.39	78-79	N05°39'W	84.53
8-9	N73°05'E	71.17	9-10	S16°32'E	15.49	39-40	N80°37'W	7.15	59-60	S67°39'W	10.95	79-80	N03°29'W	11.96
9-10	S16°32'E	15.49	10-11	S72°36'W	39.89	40-41	N88°07'W	9.97	60-61	S62°20'W	6.09	80-81	N03°11'W	3.25
10-11	S72°36'W	39.89	11-12	S19°50'E	80.91	41-42	N00°38'E	1.21	61-62	N18°22'W	1.54	81-82	N64°12'E	175.50
11-12	S19°50'E	80.91	12-13	S73°40'W	71.47	42-43	N89°22'W	3.20	62-63	S71°38'W	3.20	82-83	N86°54'E	7.77
12-13	S73°40'W	71.47	13-14	S07°11'W	47.78	43-44	S00°38'W	1.14	63-64	S18°22'E	2.06	83-1	N86°54'E	23.66
13-14	S07°11'W	47.78	14-15	N80°39'W	18.97	44-45	N88°07'W	10.83	64-65	S62°20'W	1.12	Tie Line: From BBM NO. 8, CAD. 259, PASAY CADASTRE TO COR.		
14-15	N80°39'W	18.97	15-16	S31°30'W	26.09	45-46	S83°23'W	6.63	65-66	S71°38'W	182.47	LOT BEARING DISTANCE		
15-16	S31°30'W	26.09	16-17	S07°03'W	24.75	46-47	N06°37'W	1.19	66-67	N01°56'E	65.10	BDRY.	S25°49'W	176.49 M.
16-17	S07°03'W	24.75	17-18	N80°17'W	2.95	47-48	S83°23'W	3.20	67-68	N19°26'E	90.00	LOT	S25°49'W	176.49 M.
17-18	N80°17'W	2.95	18-19	S09°43'W	1.28	48-49	S06°37'E	1.19	68-69	N01°51'W	30.00			
18-19	S09°43'W	1.28	19-20	N80°37'W	21.80	49-50	S83°23'W	2.15	69-70	N05°42'E	3.33			
19-20	N80°37'W	21.80	20-21	N09°43'E	1.41	50-51	S79°10'W	15.09	70-71	N20°33'E	3.33			
20-21	N09°43'E	1.41	21-22	N80°17'W	3.20									
21-22	N80°17'W	3.20	22-23	S09°43'W	1.43									
22-23	S09°43'W	1.43	23-24	N80°37'W	16.80									
23-24	N80°37'W	16.80	24-25	N09°43'E	1.02									
24-25	N09°43'E	1.02	25-26	N80°17'W	3.20									
25-26	N80°17'W	3.20	26-27	S09°43'W	1.04									
26-27	S09°43'W	1.04	27-28	N80°37'W	18.05									
27-28	N80°37'W	18.05	28-29	N09°43'E	1.15									
28-29	N09°43'E	1.15	29-30	N80°17'W	3.20									
29-30	N80°17'W	3.20	30-31	S09°43'W	1.17									
30-31	S09°43'W	1.17												
31-32	N78°46'W	5.85												
32-33	N56°17'W	5.85												
33-34	N33°43'W	5.85												
34-35	N11°14'W	5.85												
35-36	N01°36'E	75.00												
36-37	N19°26'E	90.00												
37-38	N01°51'W	30.00												
38-39	N05°42'E	3.33												
39-40	N20°33'E	3.33												
40-41	N35°50'E	3.33												
41-42	N50°37'E	3.33												
42-43	N65°44'E	3.33												
43-44	N80°41'E	3.33												
44-45	N88°11'E	96.73												
45-46	N88°11'E	6.50												
46-47	N88°11'E	15.14												
47-48	N05°39'W	84.53												
48-49	N03°29'W	11.96												
49-50	N03°29'W	3.24												
50-51	N64°12'E	175.50												
51-52	N86°54'E	7.77												
52-1	N86°54'E	23.66												



ORIGINAL SURVEY _____ Surveyed _____ Approved _____

Cad/Plat/Gss _____

Lot No. LOT 6005-C, Psd-00-056030 Patent No. _____ Date _____

Decree No. _____ Date _____ LRC Rec. No. _____

OCT No. _____ Dated _____ Issued to _____

TCT No. _____ Dated _____ Issued to LIGHT RAIL TRANSIT AUTHORITY

SUBDIVISION
PLAN

LOT 6005-C, Psd-00-056030

AS SURVEYED FOR
LIGHT RAIL TRANSIT AUTHORITY

SITUATED IN THE

RURBAN CODE :

BARANGAY OF : VILLAMOR AIR BASE

MUN. / CITY OF : PASAY CITY

PROVINCE OF : METRO MANILA

ISLAND OF : LUZON

CONTAINING AN AREA OF 105,722.87 SQ. M.

PPCS - TM/PRS 92 ZONE NO.:

BEARINGS : TRUE

SCALE 1: 2000

0 20 40 80 120 160 200 m.

I hereby certify that this is a correct plan of LOT 6005-C, Psd-00-056030 as plotted based on the subdivision plan of Lot 6005 Cad 259, Pasay Cadastre Sgs-13-000010 and subdivided it into thirteen lots based on the revised alignment for the Proposed NMA Expressway Project (Phase II).

March 07, 2014
Date of Preparation

CRISTY F. OCFEMIA
CRISTY F. OCFEMIA
GEODETIC ENGINEER

PRC ID No.: _____ Date: _____
PTR No.: _____ Date: _____
TIN No.: _____

Republic of the Philippines
Department of Environment and Natural Resources
LAND MANAGEMENT SERVICES
Region Office...NCR
Manila

The survey plotted herein is found to be in order as per submitted survey returns of the Geodetic Engineer and therefore recommended for approval.

CHIEF, REGIONAL SURVEYS DIVISION

APPROVED: _____

This approved plan, however, shall not be construed as title to the land.

OIC, REGIONAL TECHNICAL DIRECTOR FOR LANDS

Date Submitted/ Re-submitted	Date Returned	Remarks	Documents Received by:

Printed Name & Signature _____ Date _____

Position verified by _____ N. _____ E. by _____

Projected on P.M. _____

Field Notes checked by _____

Traverse Computation checked by _____

Astronomical Computation checked by _____

Lot Data Computation checked by _____

Plotted / Inked by _____

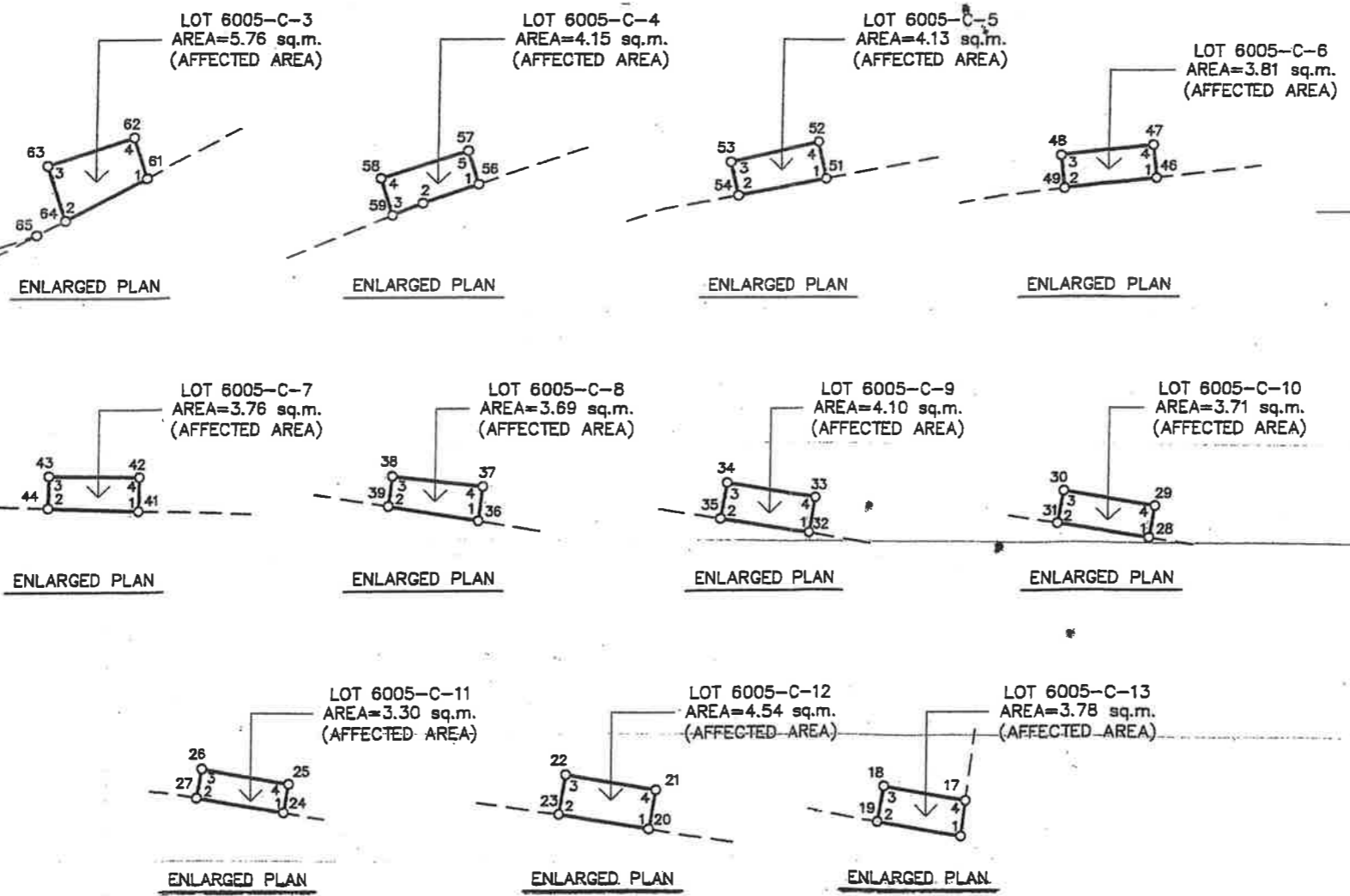
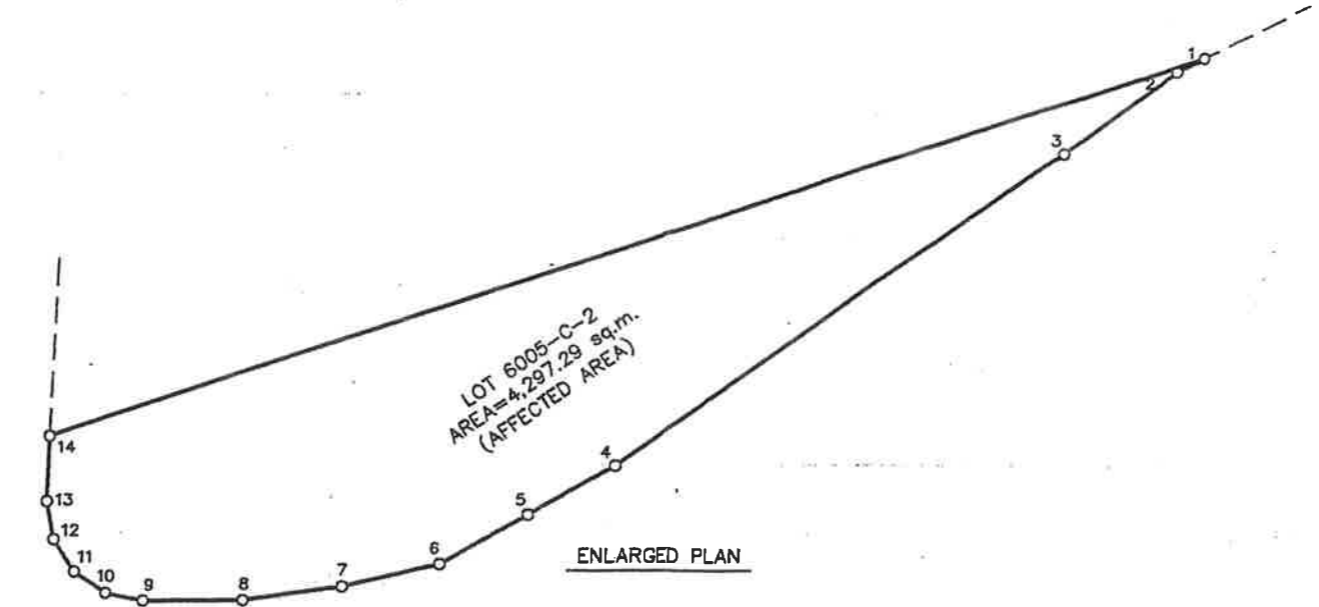
Traced by _____

Checked and Verified by _____

ADDITIONAL INFORMATION AFTER DATE OF APPROVAL

SHEET NO. 1 OF 2

TECHNICAL DESCRIPTION			Title Line: From BBM NO. 8, CAD. 259, PASAY CADSTRE TO COR.		
LINES	BEARING	DISTANCE	LOT	BEARING	DISTANCE
LOT 6005-C-2					
1-2	S62°20'W	4.58 M.	LOT 6005-C-2	S28°58'W	540.83 M.
2-3	S53°24'W	21.10 "			
3-4	S54°48'W	82.00 "	LOT 6005-C-3	S26°41'W	537.28 M.
4-5	S60°28'W	15.00 "			
5-6	S60°10'W	15.00 "	LOT 6005-C-4	S25°16'W	521.88 M.
6-7	S76°50'W	15.00 "			
7-8	S82°10'W	15.00 "	LOT 6005-C-5	S23°30'W	508.03 M.
8-9	S89°45'W	15.00 "			
9-10	N78°46'W	5.85 "	LOT 6005-C-6	S21°32'W	497.13 M.
10-11	N56°17'W	5.85 "			
11-12	N33°43'W	5.85 "	LOT 6005-C-7	S19°18'W	489.85 M.
12-13	N11°14'W	5.85 "			
13-14	N01°56'E	9.90 "	LOT 6005-C-8	S16°59'W	485.28 M.
14-1	N71°38'E	182.48 "			
LOT 6005-C-3					
1-2	S82°20'W	3.24 M.	LOT 6005-C-9	S14°40'W	483.08 M.
2-3	N18°22'W	2.06 "			
3-4	N71°38'E	3.20 "	LOT 6005-C-10	S12°09'W	481.59 M.
4-1	S18°22'E	1.54 "			
LOT 6005-C-4					
1-2	S70°59'W	2.06 M.	LOT 6005-C-11	S09°37'W	481.03 M.
2-3	S67°39'W	1.14 "			
3-4	N17°46'W	1.39 "	LOT 6005-C-12	S07°14'W	481.36 M.
4-5	N72°14'E	3.20 "			
5-1	S17°46'E	1.25 "	LOT 6005-C-13	S04°18'W	482.93 M.
LOT 6005-C-5					
1-2	S79°10'W	3.20 M.			
2-3	N13°02'W	1.23 "			
3-4	N76°58'E	3.20 "			
4-1	S13°02'E	1.35 "			
LOT 6005-C-6					
1-2	S83°23'W	3.20 M.			
2-3	N08°37'W	1.19 "			
3-4	N83°23'E	3.20 "			
4-1	S08°37'E	1.19 "			
LOT 6005-C-7					
1-2	N88°07'W	3.20 M.			
2-3	N00°38'E	1.14 "			
3-4	S89°22'E	3.20 "			
4-1	S00°38'W	1.21 "			
LOT 6005-C-8					
1-2	N80°37'W	3.20 M.			
2-3	N06°41'E	1.08 "			
3-4	S83°19'E	3.20 "			
4-1	S06°41'W	1.23 "			
LOT 6005-C-9					
1-2	N80°37'W	3.20 M.			
2-3	N09°43'E	1.29 "			
3-4	S80°17'E	3.20 "			
4-1	S09°43'W	1.27 "			
LOT 6005-C-10					
1-2	N80°37'W	3.20 M.			
2-3	N09°43'E	1.17 "			
3-4	S80°17'E	3.20 "			
4-1	S09°43'W	1.15 "			
LOT 6005-C-11					
1-2	N80°37'W	3.20 M.			
2-3	N09°43'E	1.04 "			
3-4	S80°17'E	3.20 "			
4-1	S09°43'W	1.02 "			
LOT 6005-C-12					
1-2	N80°37'W	3.20 M.			
2-3	N09°43'E	1.43 "			
3-4	S80°17'E	3.20 "			
4-1	S09°43'W	1.41 "			
LOT 6005-C-13					
1-2	N80°37'W	3.01 M.			
2-3	N09°43'E	1.28 "			
3-4	S80°17'E	2.95 "			
4-1	S07°03'W	1.26 "			



ORIGINAL SURVEY _____ Surveyed _____ Approved _____
 Cad/Plat/Gas _____
 Lot No. LOT 6005-C, Psd-00-056030 Patent No. _____ Date _____
 Decree No. _____ Date _____ LRC Rec. No. _____
 OCT No. _____ Dated _____ Issued to _____
 TCT No. _____ Dated _____ Issued to LIGHT RAIL TRANSIT AUTHORITY

SUBDIVISION PLAN
 LOT 6005-C, Psd-00-056030
 AS SURVEYED FOR
LIGHT RAIL TRANSIT AUTHORITY
 SITUATED IN THE
 RURBAN CODE :
 BARANGAY OF : VILLAMOR AIR BASE
 MUN. / CITY OF : PASAY CITY
 PROVINCE OF : METRO MANILA
 ISLAND OF : LUZON
 CONTAINING AN AREA OF **105,722.87 SQ. M.**
 PPCS - TM/PRS 92 ZONE NO. :
 BEARINGS : TRUE
 SCALE 1: 800

I hereby certify that this is a correct plan of LOT 6005-C, Psd-00-056030 as plotted based on the subdivision plan of Lot 6005 Cad 259, Pasay Cadastre Sgs-13-000010 and subdivided it into thirteen lots based on the revised alignment for the Proposed NIA Expressway Project (Phase II).

March 07, 2014
 Date of Preparation

[Signature]
CRISTY T. OCCEMIA
 GEODETIC ENGINEER

PRC ID No.: _____ Date: _____
 PTR No.: _____ Date: _____
 TIN No.: _____

Republic of the Philippines
 Department of Environment and Natural Resources
LAND MANAGEMENT SERVICES
 Region Office - NCR
 Manila

The survey plotted herein is found to be in order as per submitted survey returns of the Geodetic Engineer and therefore recommended for approval.

CHIEF, REGIONAL SURVEYS DIVISION
 APPROVED: _____

This approved plan, however, shall not be construed as title to the land.

OIC, REGIONAL TECHNICAL DIRECTOR
 FOR LANDS

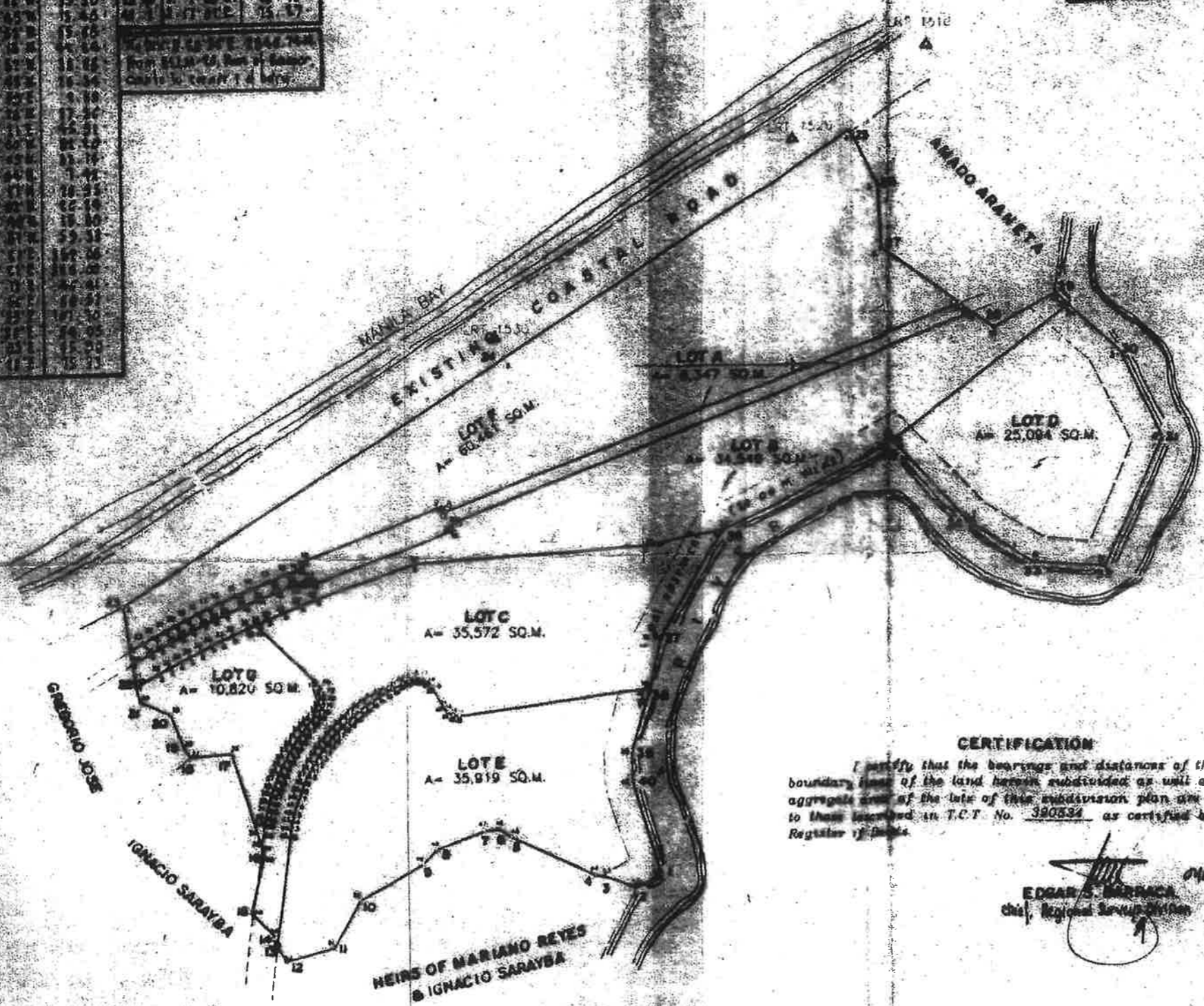
Date Submitted/Re-submitted	Date Returned	Remarks	Documents Received by:

Printed Name & Signature _____ Date _____

Position verified by _____
 Projected on P.M. _____ N. _____ E. by _____
 Field Notes checked by _____
 Traverse Computation checked by _____
 Astronomical Computation checked by _____
 Lot Data Computation checked by _____
 Plotted / Inked by _____
 Traced by _____
 Checked and Verified by _____

ADDITIONAL INFORMATION AFTER DATE OF APPROVAL

BOUNDARY		CONT.	
LINE	DISTANCE	BEARING	AREA
1	110.55 M		
2	50.01		
3	53.18		
4	56.32		
5	150.22		
6	38.86		
7	43.82		
8	67.11		
9	13.43		
10	15.37		



RECEIVED
 BUREAU OF LAND MANAGEMENT
 COORDINATOR: [Signature]
 DATE: [Date]

Subdivision Plan
 OF PSD-169547
 AS SURVEYED FOR
RODOLFO REALTY & DEVELOPMENT CORPORATION
 SITUATED IN THE
 BUREAU OF LAND MANAGEMENT
 SARAMAYANG, LUPAT (PULANG LUPAT)
 PROVINCE OF ZAMBALESA
 ISLAND OF LUZON
 CONTAINING AN AREA OF 210,762 SQ. M.
 ZONE NO.:
 REG. NO. / REG. NO. 2:
 BEARING: TRUE
 SCALE: 1:3000

I hereby certify that this is a correct plan of the survey made by the party or parties named in conformity with the provisions of applicable laws of the Republic of the Philippines and the rules and regulations of the Department of Environment and Natural Resources.
 I further certify that this plan accurately indicates the boundaries of the property as indicated in the ground by the survey claimant or his authorized representative and that I assume full responsibility for the technical accuracy of the survey and the accuracy of the measurements.

NOV 23-30 2008
 Date of Survey
SUSANO BINAG JR.
 SURVEYOR
 Reg. No. 1004
 Date of Registration: 02-09-2008

Republic of the Philippines
 Department of Environment and Natural Resources
 Lands Management Services
 Calabarzon Region
 CALAMBA CITY

I hereby certify to the technical correctness of the survey plotted herein, the original fieldnotes and computations of which are on file in this office; therefore, the same is hereby recommended for approval.

EDGAR S. BARRACA
 CHIEF, REGIONAL SURVEY DIVISION
 APPROVED August 31, 2010
 This approved plan, however, shall not constitute as title to the land.
 MAXIMO P. SORIANO, JR.
 OIC, REGIONAL TECHNICAL DIRECTOR
 8.11.10

CERTIFICATION
 I certify that the bearings and distances of the boundary lines of the land herein subdivided as well as the aggregate area of the lots of this subdivision plan are identical to those recorded in T.C.T. No. 390334 as certified by the Registrar of Deeds.

EDGAR S. BARRACA
 Chief, Regional Survey Division

With my conformity
MELBUENES A. RODRIGUEZ
 ADMINISTRATOR, LRTA
VICTOR T. YU
 LOT OWNER
 PRESIDENT - RODOLFO REALTY & DEVELOPMENT CORP.

VERIFICATION FEE
 Paid Under
 O.H. No. 3151258
 Date 1/17/10
 7 Lot/s 222 Corners

Note:
 All corners of boundary are old points.
 All nine corners are 15" x 15" concrete monuments 15x40 cm.
 This survey plan supersedes Psd 04-043427 which was cancelled as per Cancellation Order No. 2010-028 of the OIC, Regional Technical Director, Land Management Services, Calabarzon dated August 3, 2010.
 Date: 8-6-10
 [Signature]

DATE RETURNED	REASON	RECEIVED BY

CA. W. 28 N-20 57 6
 Position verified by
 Plotted on P.M.
 Field Notes checked by
 Computation checked by
 Astronomical / Traverse / Lot Data
 Plotted / Inked by
 Checked & verified by
 ADDITIONAL INFORMATION ATTACH DATE OF APPROVAL

PsD-04-214371

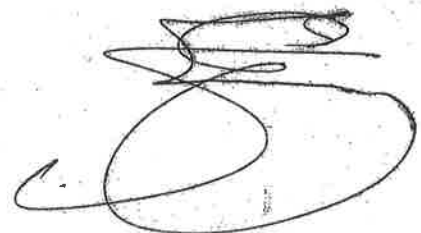
TECHNICAL DESCRIPTION

Lot A
Psd-04-214371

A parcel of land (Lot A of the subdivision plan Psd-04-214371, being a portion of Psd-109587, L.R.C. Rec. No.), situated in Brgy Talaba (Pulang Lupe), Mun. of Bacoor, Prov. of Cavite, Island of Luzon. Bounded on the NW., along lines 1 to 18 by Lot F of the subd. plan; on the NE., along line 19-19 by property of Amado Araneta; on the SE., along lines 19 to 36 by Lot B of the subd. plan and on the SW., along line 36-1 by property of Gregorio Jose.

Beginning at a point marked "1" on plan being N. 61 deg. 27 E., 2548.46 m. from BLLM No. 20, Bacoor Cavite.

thence N. 60 deg. 57 E.,	11.17 m. to point 2;
thence N. 61 deg. 45 E.,	9.51 m. to point 3;
thence N. 62 deg. 25 E.,	9.51 m. to point 4;
thence N. 63 deg. 05 E.,	9.51 m. to point 5;
thence N. 63 deg. 46 E.,	9.51 m. to point 6;
thence N. 64 deg. 27 E.,	9.51 m. to point 7;
thence N. 65 deg. 07 E.,	9.51 m. to point 8;
thence N. 65 deg. 48 E.,	9.51 m. to point 9;
thence N. 66 deg. 36 E.,	14.06 m. to point 10;
thence N. 67 deg. 24 E.,	14.06 m. to point 11;
thence N. 68 deg. 00 E.,	14.04 m. to point 12;
thence N. 68 deg. 24 E.,	14.03 m. to point 13;
thence N. 68 deg. 38 E.,	14.01 m. to point 14;
thence N. 21 deg. 22 W.,	5.41 m. to point 15;
thence N. 68 deg. 38 E.,	120.00 m. to point 16;
thence N. 21 deg. 22 E.,	5.40 m. to point 17;
thence N. 68 deg. 38 E.,	432.59 m. to point 18;
thence S. 55 deg. 33 E.,	12.09 m. to point 19;



thence	S. 68 deg. 38 W.,	439.38 m. to point 20;
thence	S. 21 deg. 22 E.,	5.40 m. to point 21;
thence	N. 68 deg. 38 W.,	120.00 m. to point 22;
thence	S. 21 deg. 22 W.,	5.40 m. to point 23;
thence	S. 68 deg. 36 W.,	13.99 m. to point 24;
thence	S. 68 deg. 24 W.,	13.97 m. to point 25;
thence	S. 68 deg. 00 W.,	13.96 m. to point 26;
thence	S. 67 deg. 24 W.,	13.94 m. to point 27;
thence	S. 66 deg. 36 W.,	13.92 m. to point 28;
thence	S. 65 deg. 48 W.,	9.39 m. to point 29;
thence	S. 65 deg. 07 W.,	9.39 m. to point 30;
thence	S. 64 deg. 27 W.,	9.39 m. to point 31;
thence	S. 63 deg. 46 W.,	9.39 m. to point 32;
thence	S. 63 deg. 06 W.,	9.39 m. to point 33;
thence	S. 62 deg. 25 W.,	9.39 m. to point 34;
thence	S. 61 deg. 45 W.,	9.39 m. to point 35;
thence	S. 60 deg. 46 W.,	14.93 m. to point 36;
thence	N. 68 deg. 37 W.,	10.72 m. to the point of

beginning containing an area of EIGHTTHOUSAND THREE HUNDRED FOURTY SEVEN (8,347) SQUARE METERS.

All point referred to all indicated on the plan and marked on the ground by P.S. cyl. conc. mens. 15x40 cm., except cor. 2-3-4 by Old points, bearings true;

date of original survey: June 4, 1958

and that of the subdivision survey: Nov. 23-30, 2008

and was approved on: August 11, 2010



VERIFIED AND FOUND CORRECT:
Calamba City
For the Regional Technical Director

EDGAR S. BARRACA
Chief, Regional Surveys Division



SUSANO V. BIHAG JR.
Geodetic Engineer

Verf. TD paid under
O.R. No. 9181268
Date: Jan. 14, 2010
Checked by: L. Villena
Verified by:



DANILO A. ANILLANO
CHIEF, ORIENTAL & SOUTHERN SURVEY SECTION

TECHNICAL DESCRIPTION

Lot B
Psd-04-214371

A parcel of land (Lot B of the subdivision plan Psd-04-214371, being a portion of Psu-169587, L.R.C. Rec. No.), situated in Brgy Talaba (Pulang Lupe), Mun. of Bacoor, Prov. of Cavite, Island of Luzon. Bounded on the NW., along lines 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18 by Lot A of the subd. plan; on the NE., along line 18-19-20 by property of Amado Araneta; on the NE., along lines 20-21 by River on the SE., along line 21-22 by Lot D of the subd. plan; along line 22-23 by River on the SE; along lines 23-24-25-26-27-28-29-30 by Lot C and on the SE., along lines 30-31-32-33-34-35-36-37-38-39-40 both of the subd. plan and on the SW., along line 40-41-1 by property of Gregorio Jose.

Beginning at a point marked "1" on plan being N. 61 deg. 41 E., 2545.27 m. from BLLM No. 20, Bacoor Cavite.

thence N. 60 deg. 46 E.,	14.83 m. to point 2;
thence N. 61 deg. 45 E.,	9.39 m. to point 3;
thence N. 62 deg. 25 E.,	9.39 m. to point 4;
thence N. 63 deg. 06 E.,	9.39 m. to point 5;
thence N. 63 deg. 46 E.,	9.39 m. to point 6;
thence N. 64 deg. 27 E.,	9.39 m. to point 7;
thence N. 65 deg. 07 E.,	9.39 m. to point 8;
thence N. 65 deg. 48 E.,	9.39 m. to point 9;
thence N. 66 deg. 36 E.,	13.82 m. to point 10;
thence N. 67 deg. 24 E.,	13.94 m. to point 11;
thence N. 68 deg. 00 E.,	13.96 m. to point 12;
thence N. 68 deg. 24 E.,	13.97 m. to point 13;
thence N. 68 deg. 36 E.,	13.98 m. to point 14;
thence S. 21 deg. 22 E.,	5.40 m. to point 15;
thence N. 68 deg. 38 E.,	120.00 m. to point 16;
thence N. 21 deg. 22 W.,	5.40 m. to point 17;



thence	N. 68 deg. 38 E.,	439.38 m. to point 18;
thence	S. 55 deg. 33 E.,	20.21 m. to point 19;
thence	N. 60 deg. 36 E.,	54.05 m. to point 20;
thence	S. 48 deg. 05 E.,	13.88 m. to point 21;
thence	N. 52 deg. 17 W.,	173.16 m. to point 22;
thence	S. 63 deg. 34 W.,	150.22 m. to point 23;
thence	S. 78 deg. 13 W.,	62.61 m. to point 24;
thence	S. 65 deg. 50 W.,	160.06 m. to point 25;
thence	S. 70 deg. 36 W.,	80.99 m. to point 26;
thence	S. 68 deg. 36 W.,	13.96 m. to point 27;
thence	S. 68 deg. 24 W.,	13.88 m. to point 28;
thence	S. 68 deg. 60 W.,	13.81 m. to point 29;
thence	S. 67 deg. 24 W.,	8.33 m. to point 30;
thence	S. 67 deg. 24 W.,	5.40 m. to point 31;
thence	S. 66 deg. 38 W.,	13.68 m. to point 32;
thence	S. 65 deg. 48 W.,	8.17 m. to point 33;
thence	S. 65 deg. 07 W.,	9.19 m. to point 34;
thence	S. 64 deg. 27 W.,	9.19 m. to point 35;
thence	S. 63 deg. 46 W.,	9.19 m. to point 36;
thence	S. 63 deg. 06 W.,	9.19 m. to point 37;
thence	S. 62 deg. 25 W.,	9.19 m. to point 38;
thence	S. 61 deg. 45 W.,	9.15 m. to point 39;
thence	S. 60 deg. 46 W.,	20.75 m. to point 40;

thence N. 13 deg. 48 W., 3.62 m. to point 41;

thence N. 08 deg. 37 W., 14.53 m. to the point of

beginning containing an area of **THIRTY FOUR THOUSAND FIVE HUNDRED FORTY NINE (34,549) SQUARE METERS.**

All point referred to all indicated on the plan and marked on the ground by P.S. cyl. conc. mons. 15x40 cm., except cor. 40 by Old points, bearings true;

date of original survey: June 4, 1958

and that of the subdivision survey: Nov. 23-30, 2008

and was approved on: August 11, 2010

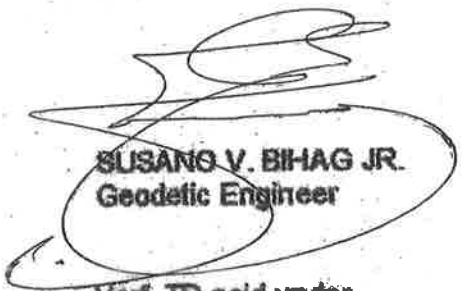
VERIFIED AND FOUND CORRECT:

Calamba City

For the Regional Technical Director

EDGAR S. BARRACA

Chief, Regional Surveys Division



SUSANG V. BIHAG JR.
Geodetic Engineer

Verf. TD paid under

O.R. No. 9181268

Date: Jan. 14, 2010

Checked by: L. Villena

Verified by:



DANILO A. ARELLANO

CHIEF, GENERAL & SPECIAL SURVEY SECTION

TECHNICAL DESCRIPTION

Lot C
Psd-04-214371

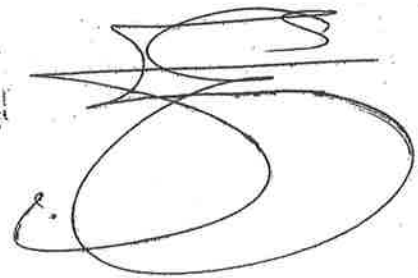
A parcel of land (Lot C of the subdivision plan Psd-04-214371, being a portion of Psu-169587, L.R.C. Rec. No.), situated in Brgy Talaba (Pulang Lupa), Mun. of Bacoor, Prov. of Cavite, Island of Luzon. Bounded on the NW., along lines 1 to 8 by Lot B of the subd. plan; on the SE., along line 8-9-10 by River on the SE; SW., & SE., along lines 10 to 47 by Lot E of the subd. plan; on the SW., & NW., along line 47-48-49-50 by property of Ignacio Sarayba and on the NW., & SW., along line 50 to 74-1 by Lot G of the subd. plan.

Beginning at a point marked "1" on plan being N. 62 deg. 08 E., 2643.51 m. from BLLM No. 20, Bacoor Cavite.

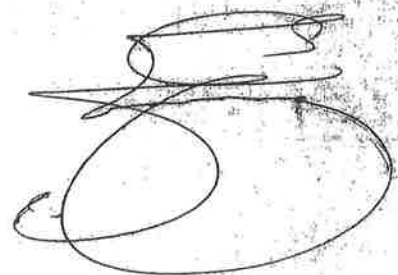
thence N. 67 deg. 24 E.,	8.33 m. to point 2;
thence N. 68 deg. 00 E.,	13.81 m. to point 3;
thence N. 68 deg. 24 E.,	13.88 m. to point 4;
thence N. 63 deg. 36 E.,	13.96 m. to point 5;
thence N. 70 deg. 36 E.,	60.90 m. to point 6;
thence N. 65 deg. 50 E.,	180.06 m. to point 7;
thence N. 76 deg 13 E.,	62.81 m. to point 8;
thence S. 30 deg. 28 W.,	98.38 m. to point 9;
thence S. 12 deg. 26 W.,	39.95 m. to point 10;
thence S. 62 deg. 15 W.,	149.94 m. to point 11;
thence N. 79 deg. 47 W.,	4.98 m. to point 12;
thence N. 60 deg. 02 W.,	4.98 m. to point 13;
thence N. 48 deg. 17 W.,	4.98 m. to point 14;
thence N. 30 deg. 24 W.,	19.37 m. to point 15;
thence N. 41 deg. 32 W.,	4.97 m. to point 16;



thence	S. 20 deg. 18 W.,	6.00 m. to point 40;
thence	S. 18 deg. 00 W.,	6.00 m. to point 41;
thence	S. 15 deg. 43 W.,	6.00 m. to point 42;
thence	S. 13 deg. 26 W.,	6.00 m. to point 43;
thence	S. 11 deg. 08 W.,	6.00 m. to point 44;
thence	S. 08 deg. 51 W.,	6.00 m. to point 45;
thence	S. 07 deg. 41 W.,	86.22 m. to point 46;
thence	N. 30 deg. 45 W.,	6.58 m. to point 47;
thence	N. 68 deg. 58 E.,	2.89 m. to point 48;
thence	N. 43 deg. 28 W.,	27.36 m. to point 49;
thence	N. 13 deg. 21 E.,	45.91 m. to point 50;
thence	N. 17 deg. 00 W.,	6.26 m. to point 51;
thence	N. 07 deg. 41 E.,	11.06 m. to point 52;
thence	N. 08 deg. 42 E.,	6.00 m. to point 53;
thence	N. 10 deg. 42 E.,	6.00 m. to point 54;
thence	N. 12 deg. 43 E.,	6.00 m. to point 55;
thence	N. 14 deg. 44 E.,	6.00 m. to point 56;
thence	N. 16 deg. 44 E.,	6.00 m. to point 57;
thence	N. 18 deg. 45 E.,	6.00 m. to point 58;
thence	N. 20 deg. 45 E.,	6.00 m. to point 59;
thence	N. 22 deg. 46 E.,	6.00 m. to point 60;
thence	N. 24 deg. 47 E.,	6.00 m. to point 61;
thence	N. 26 deg. 47 E.,	6.00 m. to point 62;



thence N. 63 deg. 23 W.,	4.97 m. to point 17;
thence N. 65 deg. 15 W.,	4.97 m. to point 18;
thence S. 73 deg. 39 W.,	4.63 m. to point 19;
thence S. 57 deg. 29 W.,	5.06 m. to point 20;
thence S. 62 deg. 46 W.,	9.08 m. to point 21;
thence S. 61 deg. 31 W.,	6.00 m. to point 22;
thence S. 59 deg. 13 W.,	6.00 m. to point 23;
thence S. 56 deg. 56 W.,	6.00 m. to point 24;
thence S. 54 deg. 39 W.,	6.00 m. to point 25;
thence S. 52 deg. 21 W.,	6.00 m. to point 26;
thence S. 50 deg. 04 W.,	6.00 m. to point 27;
thence S. 47 deg. 46 W.,	6.00 m. to point 28;
thence S. 45 deg. 29 W.,	6.00 m. to point 29;
thence S. 43 deg. 12 W.,	6.00 m. to point 30;
thence S. 40 deg. 54 W.,	6.00 m. to point 31;
thence S. 38 deg. 37 W.,	6.00 m. to point 32;
thence S. 36 deg. 19 W.,	6.00 m. to point 33;
thence S. 34 deg. 02 W.,	6.00 m. to point 34;
thence S. 31 deg. 45 W.,	6.00 m. to point 35;
thence S. 29 deg. 27 W.,	6.00 m. to point 36;
thence S. 27 deg. 10 W.,	6.00 m. to point 37;
thence S. 24 deg. 53 W.,	6.00 m. to point 38;
thence S. 22 deg. 35 W.,	6.00 m. to point 39;



thence N. 28 deg. 48 E., 6.00 m. to point 63;
 thence N. 30 deg. 49 E., 6.00 m. to point 64;
 thence N. 32 deg. 49 E., 6.00 m. to point 65;
 thence N. 34 deg. 53 E., 6.33 m. to point 66;
 thence N. 36 deg. 54 E., 5.67 m. to point 67;
 thence N. 38 deg. 51 E., 6.00 m. to point 68;
 thence N. 41 deg. 52 E., 6.09 m. to point 69;
 thence N. 44 deg. 34 E., 2.46 m. to point 70;
 thence N. 33 deg. 11 E., 5.92 m. to point 71;
 thence N. 10 deg. 17 E., 5.99 m. to point 72;
 thence N. 12 deg. 32 W., 5.89 m. to point 73;
 thence N. 35 deg. 26 W., 6.02 m. to point 74;
 thence N. 45 deg. 50 W., 66.80 m. to the point of

beginning containing an area of THIRTY FIVE THOUSAND FIVE HUNDRED SEVENTY TWO (35,572) SQUARE METERS.

All point referred to all indicated on the plan and marked on the ground by P.S. cyl. conc. mons. 15x40 cm., except cor. 8-9-10-47-48-49-50 by Old points, bearings true; date of original survey: June 4, 1958 and that of the subdivision survey: Nov. 23-30, 2008 and was approved on: August 11, 2010

VERIFIED AND FOUND CORRECT:
 Calamba City
 For the Regional Technical Director

EDGAR S. BARRACA
 Chief, Regional Surveys Division


SUSANO V. BIAG JR.
 Geodetic Engineer

Ver. TD paid under
 O.R. No. 9181268
 Date: Jan. 14, 2010
 Checked by: L Villena
 Verified by:


EDGAR S. BARRACA
 Chief, Regional Surveys Division

TECHNICAL DESCRIPTION

Lot D
Psd-04-214371

A parcel of land (Lot D of the subdivision plan Psd-04-214371, being a portion of Psu-169587, L.R.C. Rec. No.), situated in Brgy Talaba (Pulang Lupe), Mun. of Bacoor, Prov. of Cavite, Island of Luzon. Bounded on the NW., along line 1-2 by Lot B of the subd. plan; and on the NE., SE., & SW., along lines 2-3-4-5-6-7-1 by River.

Beginning at a point marked "1" on plan being N. 64 deg. 09 E., 3150.48 m. from BLLM No. 20, Bacoor Cavite.

thence	N. 52 deg. 17 E.,	173.16	m. to point 2;
thence	S. 48 deg. 05 E.,	52.03	m. to point 3;
thence	S. 26 deg. 28 E.,	75.33	m. to point 4;
thence	S. 23 deg. 08 W.,	110.22	m. to point 5;
thence	N. 87 deg. 14 W.,	56.02	m. to point 6;
thence	N. 56 deg. 04 W.,	59.18	m. to point 7;
thence	N. 44 deg. 33 W.,	66.83	m. to the point of

beginning containing an area of **TWENTY FIVE THOUSAND NINETY FOUR (25,094) SQUARE METERS.**

All point referred to all indicated on the plan and marked on the ground by P.S. cyl. conc. mons. 15x40 cm., except cor. 1,3,4,5,6,7 by Old points, bearings true; date of original survey: June 4, 1958 and that of the subdivision survey: Nov. 23-30, 2008 and was approved on: August 11, 2010

VERIFIED AND FOUND CORRECT:
Calamba City
For the Regional Technical Director

EDGAR S. BARRACA
Chief, Regional Surveys Division


SUSANO V. BIHAG JR.
Geodetic Engineer

Verif. TD paid under
O.R. No. 9181268
Date: Jan. 14, 2010
Checked by: L Villena
Verified by:


DANILO A. MALLAGA
CHIEF, SURVEY & ENGINEERING SECTION

TECHNICAL DESCRIPTION

**Lot E
Psd-04-214371**

A parcel of land (Lot E of the subdivision plan Psd-04-214371, being a portion of Psu-169587, L.R.C. Rec. No.), situated in Brgy Talaba (Pulang Lupa), Mun. of Bacoor, Prov. of Cavite, Island of Luzon. Bounded on the NW., along lines 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37 by Lot C of the subd. plan; on the NE., along lines 37-38-39-40-41-42 by River; and on the SE., along lines 42-43-44-45-46-47-48-49-50-51-52-1 by Heirs of Mariano Reyes & Ignacio Sarayba.

Beginning at a point marked "1" on plan being N. 67 deg. 14 E., 2549.18 m. from BLLM No. 20, Bacoor Cavite.

- thence N. 07 deg. 41 E., 06.22 m. to point 2;
- thence N. 08 deg. 51 E., 6.00 m. to point 3;
- thence N. 11 deg. 08 E., 6.00 m. to point 4;
- thence N. 13 deg. 26 E., 6.00 m. to point 5;
- thence N. 15 deg. 43 E., 6.00 m. to point 6;
- thence N. 18 deg. 00 E., 6.00 m. to point 7;
- thence N. 20 deg 18 E., 6.00 m. to point 8;
- thence N. 22 deg. 35 E., 6.00 m. to point 9;
- thence N. 24 deg. 53 E., 6.00 m. to point 10;
- thence N. 27 deg. 10 E., 6.00 m. to point 11;
- thence N. 29 deg. 27 E., 6.00 m. to point 12;
- thence N. 31 deg. 45 E., 6.00 m. to point 13;
- thence N. 34 deg. 02 E., 6.00 m. to point 14;
- thence N. 36 deg. 19 E., 6.00 m. to point 15;
- thence N. 38 deg. 37 E., 6.00 m. to point 16;
- thence N. 40 deg. 54 E., 6.00 m. to point 17;



thence	N. 43 deg. 12 E.,	6.00 m. to point 18;
thence	N. 45 deg. 29 E.,	6.00 m. to point 19;
thence	N. 47 deg. 46 E.,	6.00 m. to point 20;
thence	N. 50 deg. 04 E.,	6.00 m. to point 21;
thence	N. 52 deg. 21 E.,	6.00 m. to point 22;
thence	N. 54 deg. 39 E.,	6.00 m. to point 23;
thence	N. 56 deg. 56 E.,	6.00 m. to point 24;
thence	N. 59 deg. 13 E.,	6.00 m. to point 25;
thence	N. 61 deg. 31 E.,	6.00 m. to point 26;
thence	N. 62 deg. 46 E.,	9.06 m. to point 27;
thence	N. 57 deg. 29 E.,	5.06 m. to point 28;
thence	N. 73 deg. 20 E.,	4.63 m. to point 29;
thence	S. 85 deg. 15 E.,	4.97 m. to point 30;
thence	S. 63 deg. 23 E.,	4.97 m. to point 31;
thence	S. 41 deg. 32 E.,	4.97 m. to point 32;
thence	S. 30 deg. 24 E.,	19.37 m. to point 33;
thence	S. 40 deg. 17 E.,	4.98 m. to point 34;
thence	S. 60 deg. 02 E.,	4.98 m. to point 35;
thence	S. 79 deg. 47 E.,	4.98 m. to point 36;
thence	N. 62 deg. 15 E.,	149.84 m. to point 37;
thence	S. 12 deg. 26 W.,	3.87 m. to point 38;
thence	S. 16 deg. 44 W.,	47.11 m. to point 39;
thence	S. 01 deg. 30 E.,	23.43 m. to point 40;



thence S. 17 deg. 01 E.,	75.27 m. to point 41;
thence S. 64 deg. 21 W.,	22.07 m. to point 42;
thence N. 71 deg. 07 W.,	25.41 m. to point 43;
thence N. 80 deg. 23 W.,	7.66 m. to point 44;
thence N. 65 deg. 18 W.,	72.42 m. to point 45;
thence N. 56 deg. 03 W.,	11.66 m. to point 46;
thence S. 81 deg. 38 W.,	11.62 m. to point 47;
thence S. 69 deg. 06 W.,	39.59 m. to point 48;
thence S. 43 deg. 45 W.,	15.49 m. to point 49;
thence S. 60 deg. 52 W.,	55.68 m. to point 50;
thence S. 29 deg. 13 W.,	42.24 m. to point 51;
thence S. 74 deg. 52 W.,	38.69 m. to point 52;
thence N. 30 deg. 45 W.,	13.76 m. to the point of

beginning containing an area of **THIRTY FIVE THOUSAND NINE HUNDRED NINETEEN (35,919) SQUARE METERS.**

All point referred to all indicated on the plan and marked on the ground by P.S. cyl. one. mons. 15x40 cm., except cor. 37 to 52 by Old points, bearings true;

date of original survey: June 4, 1958

and that of the subdivision survey: Nov. 23-30, 2008

and was approved on: August 11, 2010

VERIFIED AND FOUND CORRECT:

Calamba City

For the Regional Technical Director

EDGAR S. BARRACA

Chief, Regional Surveys Division

SUSANO V. BIHAG JR.

Geodetic Engineer

Verf. TD paid under

O.R. No. 9181268

Date: Jan. 14, 2010

Checked by: L. Villena

Verified by:



DANILO A. BELLARD

CHIEF, CHARGE & SUPERVISOR SURVEY SECTION

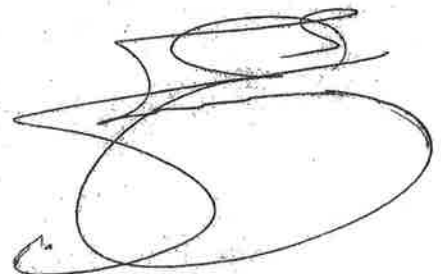
TECHNICAL DESCRIPTION

Lot F
Psd-04-214371

A parcel of land (Lot F of the subdivision plan Psd-04-214371, being a portion of Psu-169587, L.R.C. Rec. No.), situated in Brgy Talaba (Pulang Lupa), Mun. of Bacoor, Prov. of Cavite, Island of Luzon. Bounded on the SW., along line 1-2 by property of Gregorio Jose; on the NW., along lines 2-3-4 by Existing coastal Road (beyond) Manila Bay on the NE., along lines 4-5-6-7 by property of Amado Araneta and on the SE., along lines 7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-1 by Lot A of the subd. plan.

Beginning at a point marked "1" on plan being N. 61 deg. 27 E., 2548.90 m. from BLLM No. 20, Bacoor Cavite.

thence	N. 08 deg. 37 W.,	34.08 m. to point 2;
thence	N. 57 deg. 21 E.,	352.08 m. to point 3;
thence	N. 57 deg. 21 E.,	320.00 m. to point 4;
thence	S. 29 deg. 12 E.,	46.41 m. to point 5;
thence	S. 03 deg. 56 E.,	50.53 m. to point 6;
thence	S. 55 deg. 33 E.,	75.41 m. to point 7;
thence	S. 68 deg. 38 W.,	432.59 m. to point 8;
thence	N. 21 deg. 22 W.,	5.40 m. to point 9;
thence	S. 68 deg. 38 W.,	120.00 m. to point 10;
thence	S. 21 deg. 22 E.,	5.41 m. to point 11;
thence	S. 68 deg. 38 W.,	14.01 m. to point 12;
thence	S. 68 deg. 24 W.,	14.03 m. to point 13;
thence	S. 68 deg. 00 W.,	14.04 m. to point 14;
thence	S. 67 deg. 24 W.,	14.06 m. to point 15;
thence	S. 66 deg. 36 W.,	14.08 m. to point 16;
thence	S. 65 deg. 48 W.,	9.51 m. to point 17;



thence S. 65 deg. 07 W., 9.51 m. to point 18;
 thence S. 64 deg. 27 W., 9.51 m. to point 19;
 thence S. 63 deg. 46 W., 9.51 m. to point 20;
 thence S. 63 deg. 05 W., 9.51 m. to point 21;
 thence S. 62 deg. 25 W., 9.51 m. to point 22;
 thence S. 61 deg. 45 W., 9.51 m. to point 23;
 thence S. 60 deg. 57 W., 11.17 m. to the point of

beginning containing an area of **SIXTY THOUSAND FOUR HUNDRED SIXTY ONE (60,461) SQUARE METERS.**

All point referred to all indicated on the plan and marked on the ground by P.S. cyl. conc. mons. 15x40 cm., except cor. 2,3,4,5,6,7 by Old points, bearings true;
 date of original survey: June 4, 1958
 and that of the subdivision survey: Nov. 23-30, 2008
 and was approved on: August 11, 2010

VERIFIED AND FOUND CORRECT:
 Calamba City
 For the Regional Technical Director

EDGAR S. BARRACA
 Chief, Regional Surveys Division

SUSANO V. BIHAG JR.
 Geodesic Engineer

Ver. ID paid under
 O.R. No. 9181268
 Date: Jan. 14, 2010
 Checked by: L. Villena
 Verified by:

EDGAR S. BARRACA
 Chief, Regional Surveys Division

TECHNICAL DESCRIPTION

Lot G
Psd-04-214371

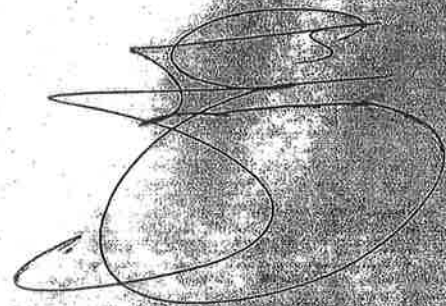
A parcel of land (Lot G of the subdivision plan Psd-04-214371, being a portion of Psu-169587, L.R.C. Rec. No.), situated in Brgy Talaba (Pulang Lupa), Mun. of Bacoor, Prov. of Cavite, Island of Luzon. Bounded on the NW., along lines 1 to 11 by Lot A; on the NE., & SE., along lines 11 to 35 by Lot C both of the subd. plan; on the SW., along line 35 to 37 by property of Ignacio Sarayba; along lines 37 to 40-1 by property of Gregorio Jose.

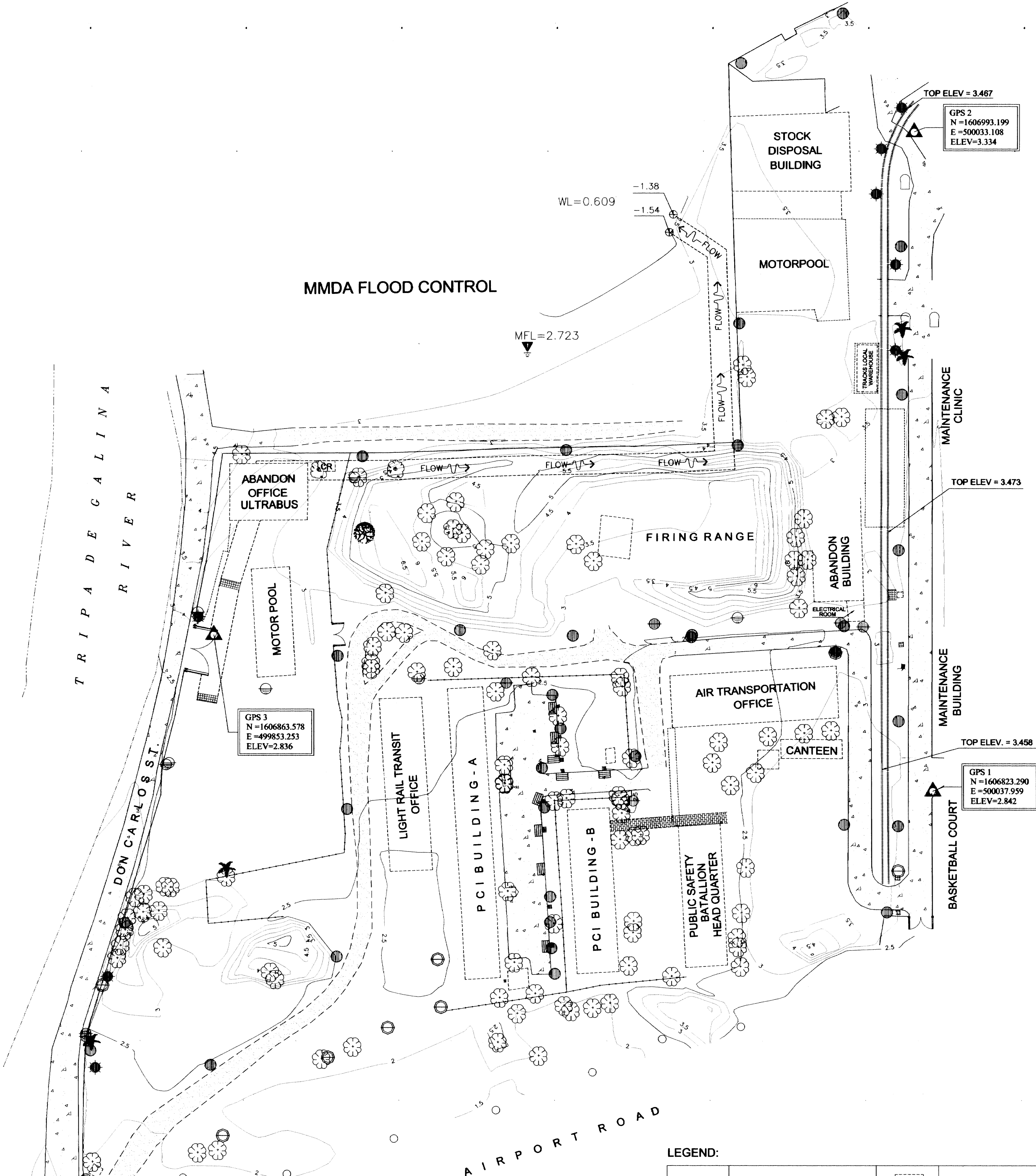
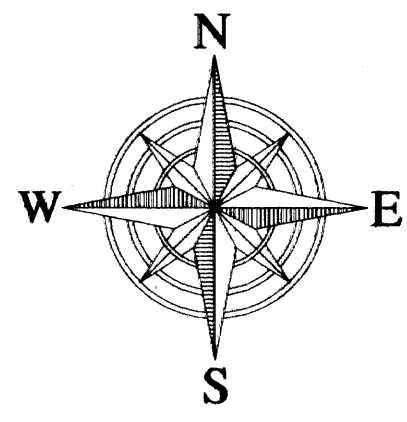
Beginning at a point marked "1" on plan being N. 62 deg 04 E., 2539.52 m.
from BLLM No. 20, Bacoor Cavite.

thence N. 60 deg. 46 E.,	20.75 m. to point 2;
thence N. 61 deg. 45 E.,	9.15 m. to point 3;
thence N. 62 deg. 25 E.,	9.19 m. to point 4;
thence N. 63 deg. 06 E.,	9.19 m. to point 5;
thence N. 63 deg. 46 E.,	9.19 m. to point 6;
thence N. 64 deg. 27 E.,	9.19 m. to point 7;
thence N. 65 deg 07 E.,	9.19 m. to point 8;
thence N. 65 deg. 48 E.,	9.17 m. to point 9;
thence N. 66 deg. 36 E.,	13.66 m. to point 10;
thence N. 67 deg. 24 E.,	5.40 m. to point 11;
thence S. 45 deg. 50 E.,	66.80 m. to point 12;
thence S. 35 deg. 26 E.,	6.02 m. to point 13;
thence S. 12 deg. 32 E.,	5.89 m. to point 14;
thence S. 10 deg. 17 W.,	5.99 m. to point 15;
thence S. 33 deg. 11 W.,	5.92 m. to point 16;
thence S. 44 deg. 34 W.,	2.46 m. to point 17;



thence	S. 41 deg. 52 W.,	6.09 m. to point 18;
thence	S. 38 deg. 51 W.,	6.00 m. to point 19;
thence	S. 36 deg. 54 W.,	5.67 m. to point 20;
thence	S. 34 deg. 53 W.,	6.33 m. to point 21;
thence	S. 32 deg. 49 W.,	6.00 m. to point 22;
thence	S. 30 deg. 49 W.,	6.00 m. to point 23;
thence	S. 28 deg. 48 W.,	6.00 m. to point 24;
thence	S. 26 deg. 47 W.,	6.00 m. to point 25;
thence	S. 24 deg. 47 W.,	6.00 m. to point 26;
thence	S. 22 deg. 46 W.,	6.00 m. to point 27;
thence	S. 20 deg. 45 W.,	6.00 m. to point 28;
thence	S. 18 deg. 45 W.,	6.00 m. to point 29;
thence	S. 16 deg. 44 W.,	6.00 m. to point 30;
thence	S. 14 deg. 44 W.,	6.00 m. to point 31;
thence	S. 12 deg. 43 W.,	6.00 m. to point 32;
thence	S. 10 deg. 42 W.,	6.00 m. to point 33;
thence	S. 08 deg. 42 W.,	6.00 m. to point 34;
thence	S. 07 deg. 41 W.,	11.06 m. to point 35;
thence	N. 17 deg. 00 W.,	75.94 m. to point 36;
thence	S. 66 deg. 00 W.,	32.14 m. to point 37;
thence	N. 33 deg. 04 W.,	7.42 m. to point 38;
thence	N. 22 deg. 17 W.,	28.95 m. to point 39;
thence	N. 66 deg. 02 W.,	26.24 m. to point 40;





GPS 3
N=1606863.578
E=499853.253
ELEV=2.836

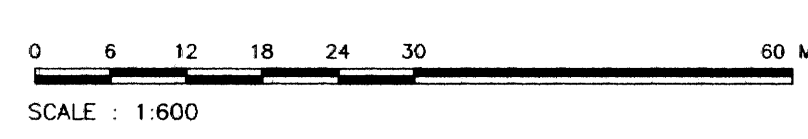
GPS 2
N=1606993.199
E=500033.108
ELEV=3.334

GPS 1
N=1606823.290
E=500037.959
ELEV=2.842

LEGEND:

	CONCRETE ROAD		BUILDING
	DIRT / ROUGH ROAD		CANOPY
	ASPHALT ROAD		SKY WAY POST
	COVERED CANAL		CONCRETE ELECTRICAL POST/ WOODEN ELECTRICAL POST
	WATER FLOW		LAMP POST/ POWER POST/ POST
	BANK		ORDINARY TREE/FRUIT BEARING/ COCONUT TREE
	FOOTPATH		SUMP
	RAILING		RECTANGULAR MANHOLE
	WALL		INVERT
	ORDINARY FENCE		MAJOR/MINOR CONTOUR

NOTE:
"TRUE COORDINATES AND ELEVATION WERE USED IN THIS TOPOGRAPHIC PLAN."
GPS 1 N=500037.959 E=1606823.290 Z=2.842
GPS 2 N=50033.108 E=1606993.199 Z=3.334
GPS 3 N=499853.253 E=1606863.578 Z=2.836



SURVEYED BY : GEOLINK CORPORATION RM. 507 WEBEY ACROPOLIS BLDG., 88 E. RODRIGUEZ JR. AVE., BAGUMBAYAN, QUEZON CITY TEL. FAX. (02) 855-6281	APPROVED BY : ERIC M. DELA PAZ GEODETIC ENGINEER P.R.C. No. : 3847 DATE : 7-9-92 P.T.R. No. : 0232169 DATE : 1-08-15	SURVEYED FOR : CMX CONSORTIUM	PROJECT TITLE : TOPOGRAPHIC SURVEY OF LRT LINE 1 SOUTH, CAVITE EXTENSION WITH AN APPROX. AREA OF 4 HAS.	SHEET CONTENTS : TOPOGRAPHIC PLAN	SHEET NO. :
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